

The Bioinformatics Lab - practical course

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Tuesdays 15:00-18:00 practical room MI 01.08.021

Organisation – practical session

- 20 min: presentation about experiences in last programming challenge
 - one student, named at end of previous session – volunteers wanted
 - 5 slides
 - his presentation will be published at the website
- 20 min: discussion / feedback about last programming challenge
- 40 min: presentation and discussion of new topics
 - one student, named at end of previous session – volunteers wanted
 - presentation interleaved with questions and discussion
 - all other students to ask at least one question
- 20 min: general discussion and outline of new programming challenge
- remaining: work on programming challenge

Organisation – individual work

- Completely implement programming challenge
 - There should be a working and documented solution on the virtual machine
- Prepare a presentation when it is your turn
 - 5 slides
 - Published at the website
- Prepare for the new topics
 - Prepare presentation in turn
 - Useful links are provided on website

Requirements to pass

- Pass 3 tests
- One presentation of experiences
- One presentation of new topics
- At least one question asked per session
- Prepare your share of Debian packages of PredictProtein components (last two sessions – work in groups)

Objective

- Learn to build an average bioinformatics lab
- Get familiar with available open source software solutions
- Work more efficiently knowing about the available tools and what is in the background of services

Topics

1. **Installing Linux / Into a Virtual Machine / Debian stable**
2. Terminal-based text editors, tar.gz packaging
3. Hypervisors, virtualization API, cloud services
4. User management / directory services
5. Mail, DNS
6. Web server
7. Databases and SQL
8. Web content management systems (Typo3 and MediaWiki)
9. Grid computing and high availability
10. Packaging for major Linux distributions
11. Debianization of PredictProtein
12. Computer clusters and external Services : excursion LRZ

Round of introduction

Topics – volunteer now

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